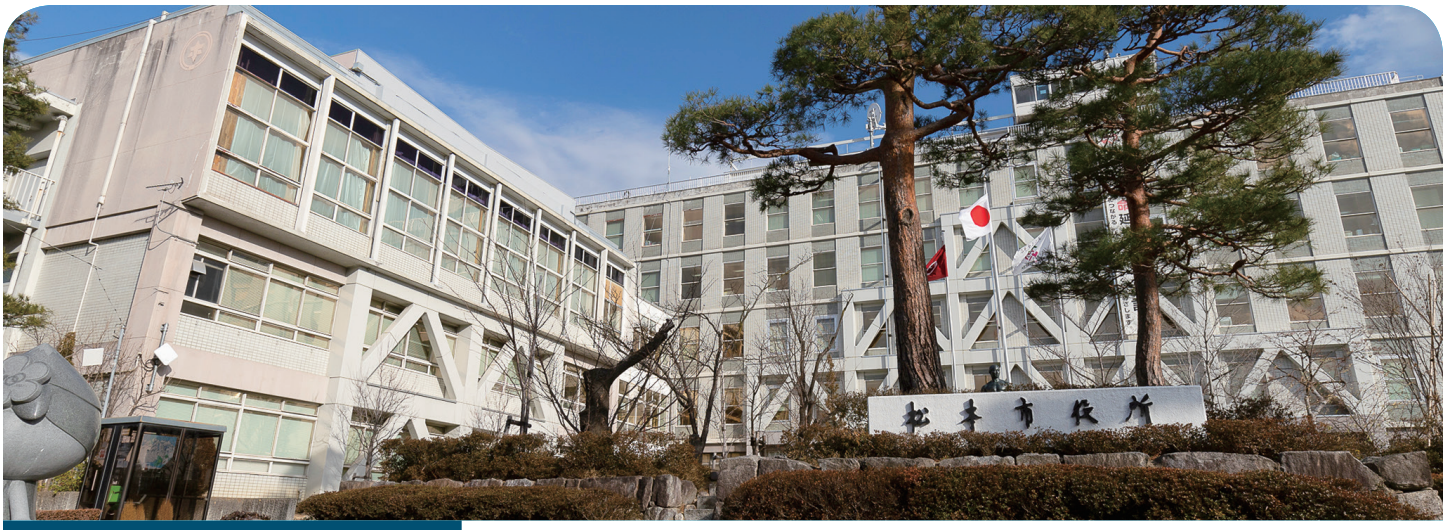
Case study
Cisco HyperFlex

Matsumoto City

Realizing continuity of virtualization operations and streamlining management operations for all business terminals using hyperconverged infrastructure



Customer name
Matsumoto City Hall

Location
3-7 Marunouchi,
Matsumoto, Nagano

Number of employees
2,067 (as of April 1, 2019)

Total population
239,635 people
(as of January 1, 2019)

Matsumoto City is a core city of the Chunanshin area in Nagano Prefecture located in the rural Chushin area. This city, which has held back its core-city transition until 2021, and the opening of its new government building until 2026, has integrated a network infrastructure mixing physical and virtual solutions using Cisco HyperFlex hyperconverged infrastructure (HCI) as part of this renewal. The city has strengthened its security and streamlined business continuity and administrative operations.

Matsumoto City is a core city in the Chunanshin area of Nagano Prefecture, which is surrounded by magnificent mountains representing Japan - such as the Yari and the Hotaka mountain ranges to the west and the Utsukushigahara plateau to the east; it is blessed with plenty of nature, history, culture, and tradition. Joka Machi, whose symbol is the national treasure of Matsumoto Castle, is represented by the “Three Gakutos” - “Mountaian Gakuto,” which welcomes many alpinists as the entrance to the northern Japanese Alps, “Music Gakuto,” where music festivals are held, and “Knowledge Gakuto,” which continues the tradition of academic education inherited from the national-treasure Kaichi School.

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Challenges

- Physical and virtual environments need to be blended and managed together
- Security of physical terminals needs to be enhanced
- Administrative services need to continue without disruption even when government buildings are being rebuilt
- High scalability and streamlining management operations are needed for the core-city transition

Solutions

- Integration and virtualization of all infrastructure using Cisco HyperFlex
- Completion of construction in a short period of time, using remote settings after completing verification
- Balancing high performance and cost containment through a hybrid composition

Results and future plans

- Create an infrastructure that has high scalability and flexibility and that can provide support even during core city transitions and when government buildings are rebuilt
- Enable virtualization for all business terminals and enhance the continuity of business operations and security on the integrated infrastructure
- Reduce administrative load by outsourcing management operations
- Promote a variety of ways to work

"We have chosen the Cisco HyperFlex system after assessing the high performance, scalability, cost, and operation structure in a comprehensive manner."

Yujiro Kato
Staff of Information Policy Division, Matsumoto City Hall

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Challenge

Matsumoto City's goal for this first network-infrastructure renewal in about five years was to integrate a flexible and efficient infrastructure that could provide support for various trends anticipated in future. Mr. Yujiro Kato, Staff of Information Policy Division, Matsumoto City Hall, had this to say regarding the challenges up until now and the aims of the renewal.

"In 2014, we made an effort to virtualize 450 operational software terminals that handle personal information, and in 2017, we virtualized 500 Internet software terminals with the local government's measures to strengthen its systems, and separated network and Internet management within government agencies, but about 2000 LGWAN software terminals still have physical environments and are being doubly managed. With this renewal, after we have virtualized all 3000 terminals with operational, LGWAN, and Internet software within government agencies, we established stable operation and scalability by integrating infrastructure platforms and decided to aim to streamline administrative operations."

With scalability and administrative operations for the new infrastructure as a backdrop, Shunsuke Hara, Staff of Information Policy Division, explained the balance of Matsumoto City's core-city transition plan scheduled to take place in 2021.

"For the transition to a core city, we have received about 2500 clerical authority transfers from the prefectural government and aim to perform independent administrative management in response to the declining birthrate, the growing population of elderly people, and the declining population. In that case, the number of personnel will greatly increase, so flexible scalability and improved streamlining of administrative operations have been requested for the new infrastructure."

In addition, Ryota Jouo, director of information policy, said that he has anticipated not only the compatibility of safety with diversified working methods such as telework promotion, work-life balance measures, and business continuity during disasters, but has also anticipated the reconstruction of government buildings, which are scheduled to open in 2026.

"We are aiming to start the services in 2026, and the new government building construction plan, which will rebuild the deteriorated city hall buildings on site, will be able to move forward. When construction starts, business operations will continue, after moving to other locations, based on the department, so we decided that virtualization of all business terminals was optimal, because, that way, business operations can be continued safely regardless of location."

We have integrated all the infrastructure and operations and have aimed to establish business continuity and scalability, as well as streamline administrative operations.

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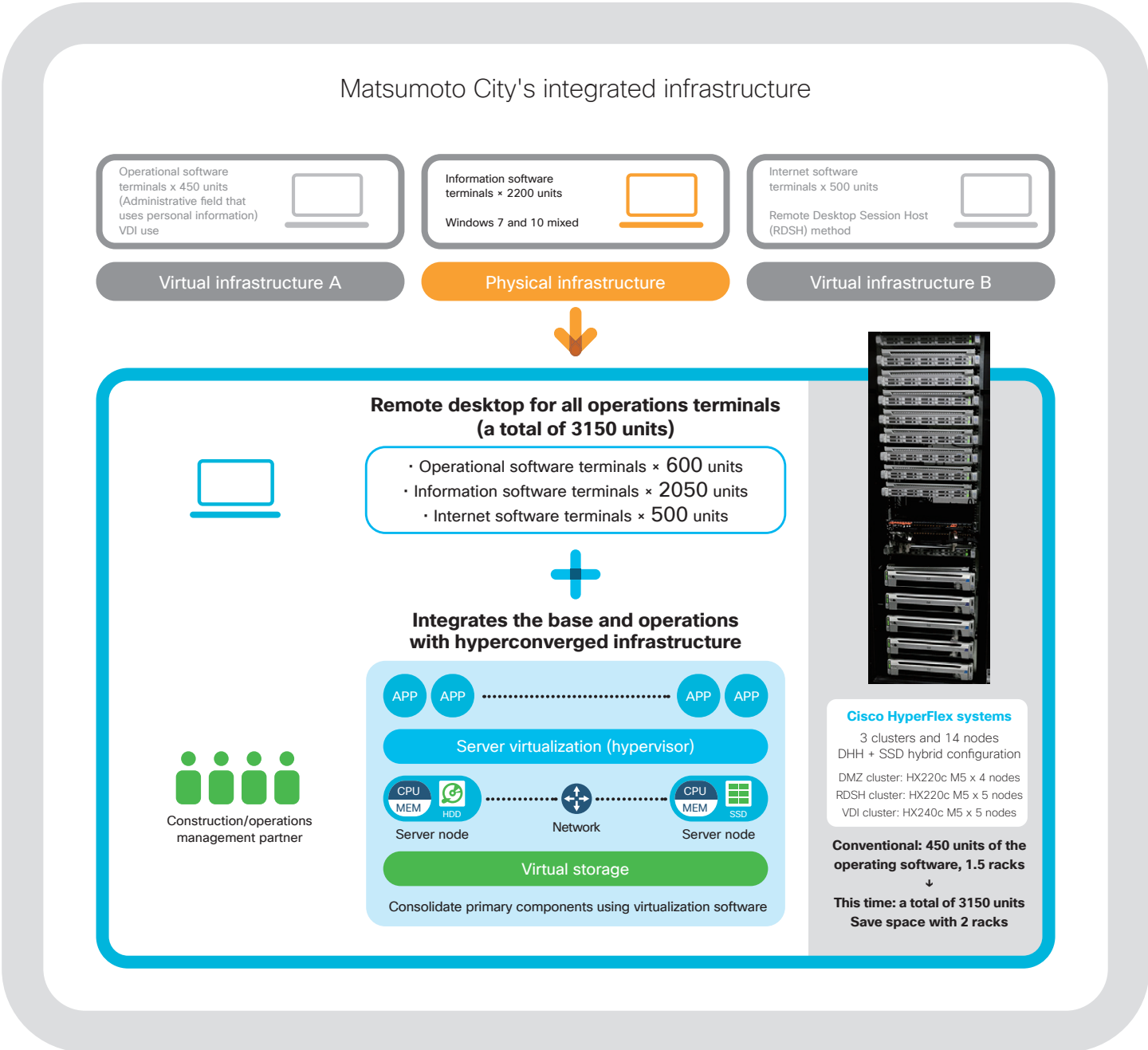
Solution

Matsumoto City summarized these requirements in a procurement specifications document and decided to adopt the hyperconverged infrastructure, Cisco Hyperflex systems, after making a selection based on proposals from each company. Cisco HyperFlex, which was introduced and constructed recently, has three clusters and 14 nodes, made up of a hybrid composition of hard-disk drives (HDDs) and solid-state drives (SSDs). It is an infrastructure for remote desktop services (RDSs) and virtual desktop infrastructures (VDIs), which provide all end-users' operating systems from one resource pool. Mr. Kato had this to say regarding the reasons and expectations for the selection.

"We have been paying attention to HCI as an infrastructure that will be easy to expand without stopping business operations when the number of personnel increases during the future core city transition and when the government buildings are being rebuilt. We have chosen Cisco HyperFlex systems after comparing the HCIs of each company and judging the high performance, scalability, cost, and operation



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structure in a comprehensive manner. The Cisco construction partners were able to respond with enthusiasm from the time of the proposal and verification, and I had expectations that I could easily entrust them with the operational maintenance, which a small number of employees had worked hard on to this date."

High performance even with a thin client, cost effective compared to a full SSD

Mr. Hara evaluates required performance as follows:

"The performance of a virtualization infrastructure that is used by all employees is directly linked to business productivity, so we were worried, but the startup was fast even with Cisco HyperFlex's Hybrid composition, so sufficient performance was attained. Being more cost effective compared to a full SSD was also a big advantage."

Speedy construction, remote-access settings reduce presence load

In addition, Mr. Jouo brought up the speed of construction as an advantage specific to HCI and had this to say:

"During the four months from the order placement to its realization on the scheduled operation start date of October 1, the time that was spent on construction, excluding test periods, was only about two months, but the device ran smoothly without any initialization failures. Up until now, every time we had to bring in, construct, and test many devices like servers and storage, we often had to be present many times, but this time, after we brought in an all-in-one device that had been verified, we could provide construction support remotely, so we were able to focus on the original operations with a smaller presence load, which was very helpful."

Benefits and future plans

Construction finished as initially planned, and operations using the new infrastructure started on October 1, 2019. Mr. Jouo said that the transition to the employees' virtual environment developed smoothly for the most part, and operation efficiency as well as stability increased. He also offered the following reflections:

"Cisco's construction partners kept in close contact with us from the time of verification and construction. Even after operations started, they reduced our workload by quite a bit by outsourcing administrative operations. We contacted Cisco TAC. They provided maintenance support 24 hours a day, 365 days a year, so we were very relieved. The complicated inquiry windows of the past have been consolidated. They provide speedy correspondence regarding the everyday requests from employees."

Mr. Hara said that in the future, as wireless networks inside government buildings spread in the future, he will promote efforts for new working methods such as teleworking.

"We will create an environment where people can continue working no matter which seat they are in by the time the new government buildings are rebuilt. Many workers who go on business trips, such as those in

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charge of the commerce and tourism division and immigration promotion, will be able to safely work on the go once we virtualize the environment with the new infrastructure. This is being received well."

Finally, Mr. Kato summarized this project and wrapped things up with the following:

"This time, we streamlined administrative operations in addition to achieving the stability and safety that we had initially aimed for with the integration of the infrastructure. We were uneasy about the large scale and short-term construction of the core system that is directly linked to the provision of municipal services, but we were able to execute it smoothly without any issues. We were also able to have experts deal with administrative operations, so we are extremely relieved and satisfied. In the future, we hope to be able to provide support for safe and convenient infrastructure operations to employees in order to provide even better municipal services."

Other detailed information

For details about Cisco HyperFlex systems, please visit www.cisco.com/jp/go/hyperflex.

URL https://www.city.matsumoto.nagano.jp/

Matsumoto City is located near the center of Honshu and Nagano Prefecture. It was municipalized on May 1, 1907, and later on, the current city area was formed through mergers with neighboring villages. In 2007, it celebrated its 100th year of municipalization. It is called "Three Gakuto Matsumoto" - Mountain Gakuto, Music Gakuto, and Knowledge Gakuto. There is the "Mountain Gakuto," which is part of Japanese Alps and welcomes many alpinists, "Music Gakuto," in the streets of which people can hear the tunes of violins at street corners and enjoy the Seiji Ozawa Matsumoto Festival, and "Knowledge Gakuto" - a metropolitan area that cherishes knowledge from the past and values students greatly and was created by the progressive spirits of citizens who love discussions. On November 1, 2000, Three Gakuto Matsumoto was designated a special city. It moved forward with the promotion of decentralization and the creation of a unique and distinctive town. The plan is for the town to transition to a core city by 2021.

Products and services

- Cisco HyperFlex® systems
- Cisco Nexus® 9200 Series Switches
- Cisco UCS® C220 M5 Rack Server

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